

WHAT IS CLAIMED IS:

- 1 1. A heat resistant laminated conveyor belt comprising a belt
2 core layer made by a heat resistant non-metallic fiber substrate being
3 impregnated with a fluororesin dispersion and then dried and sintered
4 and a surface layer formed on said belt core layer via an adhesive layer
5 made by a fluororesin film, said surface layer having a fabric structure
6 using an element wire or wires made of a ferrous metal or having a
7 structure in which said element wire or wires are arranged together.
- 1 2. A heat resistant laminated conveyor belt comprising a belt
2 core layer made by a heat resistant non-metallic fiber substrate being
3 impregnated with a fluororesin dispersion and then dried and sintered
4 and a surface layer formed on said belt core layer via an adhesive layer
5 made by a fluororesin film, said surface layer having a fabric structure
6 using an element wire or wires made of at least one of a non-ferrous
7 metal, inorganic compound, organic compound and carbon or having a
8 structure in which said element wire or wires are arranged together.
- 1 3. A heat resistant laminated conveyor belt comprising a belt
2 core layer made by a heat resistant non-metallic fiber substrate being
3 impregnated with a fluororesin dispersion and then dried and sintered,
4 an intermediate layer laminated on said belt core layer via an adhesive
5 layer made by a fluororesin film, said intermediate layer being made by
6 a heat resistant non-metallic fiber substrate being impregnated with a
7 fluororesin dispersion and then dried and sintered, and a surface layer
8 laminated on said intermediate layer via an adhesive layer made by a

9 fluororesin film, said surface layer having a fabric structure using an
10 element wire or wires made of a ferrous metal or having a structure in
11 which said element wire or wires are arranged together.

1 4. A heat resistant laminated conveyor belt comprising a belt
2 core layer made by a heat resistant non-metallic fiber substrate being
3 impregnated with a fluororessin dispersion and then dried and sintered,
4 an intermediate layer laminated on said belt core layer via an adhesive
5 layer made by a fluororessin film, said intermediate layer being made by
6 a heat resistant non-metallic fiber substrate being impregnated with a
7 fluororessin dispersion and then dried and sintered, and a surface layer
8 laminated on said intermediate layer via an adhesive layer made by a
9 fluororessin film, said surface layer having a fabric structure using an
10 element wire or wires made of at least one of a non-ferrous metal,
11 inorganic compound, organic compound and carbon or having a
12 structure in which said element wire or wires are arranged together.

1 5. A heat resistant laminated conveyor belt as claimed in Claim
2 1, wherein said ferrous metal is steel of iron steel, carbon steel,
3 stainless steel or the like.

1 6. A heat resistant laminated conveyor belt as claimed in Claim
2 3, wherein said ferrous metal is steel of iron steel, carbon steel,
3 stainless steel or the like.

1 7. A heat resistant laminated conveyor belt as claimed in Claim
2 2, wherein said non-ferrous metal is at least one of aluminum, copper
3 and titanium, said inorganic compound is at least one of glass, alumina,
4 silica, alumina silica and zirconia and said organic compound is at

5 least one of polyetheretherketone, polyimide, polyamideimide,
6 polyetherimide, polyphenylene sulfide and aromatic allylate.

1 8. A heat resistant laminated conveyor belt as claimed in Claim
2 4, wherein said non-ferrous metal is at least one of aluminum, copper
3 and titanium, said inorganic compound is at least one of glass, alumina,
4 silica, alumina silica and zirconia and said organic compound is at
5 least one of polyetheretherketone, polyimide, polyamideimide,
6 polyetherimide, polyphenylene sulfide and aromatic allylate.

1 9. A heat resistant laminated conveyor belt as claimed in Claim
2 1, wherein said heat resistant non-metallic fiber substrate is of at least
3 one of a glass fiber, carbon fiber, aramide fiber, aromatic allylate fiber
4 and polyparaphenylenebenzobisoxazole (PBO) fiber.

1 10. A heat resistant laminated conveyor belt as claimed in
2 Claim 2, wherein said heat resistant non-metallic fiber substrate is of
3 at least one of a glass fiber, carbon fiber, aramide fiber, aromatic
4 allylate fiber and polyparaphenylenebenzobisoxazole (PBO) fiber.

1 11. A heat resistant laminated conveyor belt as claimed in
2 Claim 3, wherein said heat resistant non-metallic fiber substrate is of
3 at least one of a glass fiber, carbon fiber, aramide fiber, aromatic
4 allylate fiber and polyparaphenylenebenzobisoxazole (PBO) fiber.

1 12. A heat resistant laminated conveyor belt as claimed in
2 Claim 4, wherein said heat resistant non-metallic fiber substrate is of
3 at least one of a glass fiber, carbon fiber, aramide fiber, aromatic
4 allylate fiber and polyparaphenylenebenzobisoxazole (PBO) fiber.

1 13. A heat resistant laminated conveyor belt as claimed in

2 Claim 1, wherein said adhesive layer is a resin film layer of a
3 polytetrafluoroethylene (PTFE) resin, denatured polytetrafluoroethylene
4 (denatured PTFE) resin, tetrafluoroethylene hexafluoropropylene
5 copolymer (FEP) resin, tetrafluoroethylene perfluoroalkoxyethylene
6 copolymer (PFA) resin, ethylene tetrafluoroethylene copolymer (ETFE)
7 resin, ethylene chlorotrifluoroethylene copolymer (ECTFE) resin or the
8 like.

1 14. A heat resistant laminated conveyor belt as claimed in
2 Claim 2, wherein said adhesive layer is a resin film layer of a
3 polytetrafluoroethylene (PTFE) resin, denatured polytetrafluoroethylene
4 (denatured PTFE) resin, tetrafluoroethylene hexafluoropropylene
5 copolymer (FEP) resin, tetrafluoroethylene perfluoroalkoxyethylene
6 copolymer (PFA) resin, ethylene tetrafluoroethylene copolymer (ETFE)
7 resin, ethylene chlorotrifluoroethylene copolymer (ECTFE) resin or the
8 like.

1 15. A heat resistant laminated conveyor belt as claimed in
2 Claim 3, wherein said adhesive layer is a resin film layer of a
3 polytetrafluoroethylene (PTFE) resin, denatured polytetrafluoroethylene
4 (denatured PTFE) resin, tetrafluoroethylene hexafluoropropylene
5 copolymer (FEP) resin, tetrafluoroethylene perfluoroalkoxyethylene
6 copolymer (PFA) resin, ethylene tetrafluoroethylene copolymer (ETFE)
7 resin, ethylene chlorotrifluoroethylene copolymer (ECTFE) resin or the
8 like.

1 16. A heat resistant laminated conveyor belt as claimed in
2 Claim 4, wherein said adhesive layer is a resin film layer of a

3 polytetrafluoroethylene (PTFE) resin, denatured polytetrafluoroethylene
4 (denatured PTFE) resin, tetrafluoroethylene hexafluoropropylene
5 copolymer (FEP) resin, tetrafluoroethylene perfluoroalkoxyethylene
6 copolymer (PFA) resin, ethylene tetrafluoroethylene copolymer (ETFE)
7 resin, ethylene chlorotrifluoroethylene copolymer (ECTFE) resin or the
8 like.

1 17. A heat resistant laminated conveyor belt as claimed in
2 Claim 1, wherein said surface layer having the fabric structure using
3 the element wire or wires or having the structure in which the element
4 wire or wires are arranged together is a plurality of layers laminated
5 one on another via an adhesive layer or layers.

1 18. A heat resistant laminated conveyor belt as claimed in
2 Claim 2, wherein said surface layer having the fabric structure using
3 the element wire or wires or having the structure in which the element
4 wire or wires are arranged together is a plurality of layers laminated
5 one on another via an adhesive layer or layers.

1 19. A heat resistant laminated conveyor belt as claimed in
2 Claim 3, wherein one or both of said intermediate layer and belt core
3 layer on the inner side of said surface layer are a plurality of layers.

1 20. A heat resistant laminated conveyor belt as claimed in
2 Claim 4, wherein one or both of said intermediate layer and belt core
3 layer on the inner side of said surface layer are a plurality of layers.

1 21. A heat resistant laminated conveyor belt manufacturing
2 method comprising:

3 a first step of forming a belt core layer by a heat resistant non-

4 metallic fiber substrate being impregnated with a fluororesin dispersion
5 and then dried and sintered and a second step of lapping a surface
6 layer over said belt core layer via an adhesive layer made by a
7 fluororesin film, said surface layer having a fabric structure using an
8 element wire or wires made of a ferrous metal or having a structure in
9 which said element wire or wires are arranged together, and bonding
10 them together with said belt core layer by a heat sealing lamination
11 process.

1 22. A heat resistant laminated conveyor belt manufacturing
2 method comprising:

3 a first step of forming a belt core layer by a heat resistant non-
4 metallic fiber substrate being impregnated with a fluororesin dispersion
5 and then dried and sintered and a second step of lapping a surface
6 layer over said belt core layer via an adhesive layer made by a
7 fluororesin film, said surface layer having a fabric structure using an
8 element wire or wires made of at least one of a non-ferrous metal,
9 inorganic compound, organic compound and carbon or having a
10 structure in which said element wire or wires are arranged together,
11 and bonding them together with said belt core layer by a heat sealing
12 lamination process.

1 23. A heat resistant laminated conveyor belt manufacturing
2 method comprising:

3 a first step of forming a belt core layer by a heat resistant non-
4 metallic fiber substrate being impregnated with a fluororesin dispersion
5 and then dried and sintered, a second step of forming an intermediate

6 layer by a heat resistant non-metallic fiber substrate being impregnated
7 with a fluororesin dispersion and then dried and sintered and lapping it
8 over said belt core layer via an adhesive layer made by a fluororesin
9 film and a third step of lapping a surface layer over said intermediate
10 layer via an adhesive layer made by a fluororesin film, said surface
11 layer having a fabric structure using an element wire or wires made of a
12 ferrous metal or having a structure in which said element wire or wires
13 are arranged together, and bonding them together with said belt core
14 layer and intermediate layer by a heat sealing lamination process.

1 24. A heat resistant laminated conveyor belt manufacturing
2 method comprising:

3 a first step of forming a belt core layer by a heat resistant non-
4 metallic fiber substrate being impregnated with a fluororesin dispersion
5 and then dried and sintered, a second step of forming an intermediate
6 layer by a heat resistant non-metallic fiber substrate being impregnated
7 with a fluororesin dispersion and then dried and sintered and lapping it
8 over said belt core layer via an adhesive layer made by a fluororesin
9 film and a third step of lapping a surface layer over said intermediate
10 layer via an adhesive layer made by a fluororesin film, said surface
11 layer having a fabric structure using an element wire or wires made of
12 at least one of a non-ferrous metal, inorganic compound, organic
13 compound and carbon or having a structure in which said element wire
14 or wires are arranged together, and bonding them together with said
15 belt core layer and intermediate layer by a heat sealing lamination
16 process.

1 25. A heat resistant laminated conveyor belt manufacturing
2 method as claimed in Claim 23, wherein one or both of said
3 intermediate layer and belt core layer on the inner side of said surface
4 layer are a plurality of layers lapped one on another via an adhesive
5 layer or layers and then applied with the heat sealing lamination
6 process.

1 26. A heat resistant laminated conveyor belt manufacturing
2 method as claimed in Claim 24, wherein one or both of said
3 intermediate layer and belt core layer on the inner side of said surface
4 layer are a plurality of layers lapped one on another via an adhesive
5 layer or layers and then applied with the heat sealing lamination
6 process.